

Claims

1. Male connector (1) for a guide wire (2), which male connector (1) comprises a core wire (3), a plurality of conductive members (4) spaced apart longitudinally along said core wire (3), a plurality of conductors (5) disposed along the core wire (3), each of the conductors (5) being connected to a respective conductive member (4), **characterized in** that the core wire (3) has such a shape that least one longitudinal cavity is provided inside the male connector (1), which longitudinal cavity remains substantially intact when the male connector (1) is bent, thereby protecting the conductors (5), which are disposed in said cavity, from being damaged if the male connector (1) is bent.

2. The male connector (1) according to claim 1, **characterized in** that the core wire (3) has a D-shaped cross section, thereby providing said cavity between the inner surface of the cylindrical conductive members (4) and the flat part of D-shaped core wire (3).

3. The male connector according to claim 2, **characterized in** that a continuous insulating material (6) is disposed between the conductive members (4) and the core wire (3), with a minimum of insulating material (6) being provided between the curved part of the D-shaped core wire (3) and the inner surface of the conductive members (4).

4. The male connector (1) according to claim 1, **characterized in** that said cavity is provided by a longitudinal recess in the mantle surface of the core wire (3).

5. The male connector (1) according to claim 1, **characterized in** that several cavities are provided by longitudinal recesses in the mantle surface of the core wire (3), and that each conductor (5) is disposed in a separate recess.

6. The male connector (1) according to claim 1, **characterized in** that several cavities are provided by longitudinal recesses in the mantle surface of the core wire (3), and that each recess accommodates at least one conductor (5).

7. The male connector (1) according to anyone of claims 4–6, **characterized in** that a continuous insulating material (6) is disposed between the conductive members (4) and the

core wire (3), with a minimum of insulating material (6) being provided between the cylindrical part of the core wire (3) and the inner surface of the cylindrical conductive members (4).

5 8. The male connector (1) according to claim 1, **characterized in** that said cavity is provided by a longitudinal hole in the core wire (3).

9. The male connector (1) according to claim 8, **characterized in** that a continuous insulating material (6) is disposed between the conductive members (4) and the core wire (3).

10. The male connector (1) according to anyone of claims 1–9, **characterized in** that at least one of the conductors (5) is connected to the proximal end of the corresponding conductive member (4).

11. The male connector (1) according to anyone of claims 1–9, **characterized in** that at least one of said conductors (5) is drawn in a loop, which extends towards the proximal end of the male connector (1) before going back to the distal end of the respective conductive member (4), where said conductor (5) is connected.

20 12. The male connector (1) according to anyone of claims 1–11, **characterized in** that the core wire (3) is provided with a layer of insulating material (12).

13. The male connector (1) according to claim 12, **characterized in** that the insulating material (12) consists of ceramic particles in a polymer matrix.

25 14. The male connector (1) according to claim 12, **characterized in** that the insulating material (12) consists of a metal oxidized to ceramic state.

15. The male connector (1) according to claim 14, **characterized in** that the core wire (3) is made of titanium, the surface of which is oxidized to titanium dioxide.

30 16. The male connector (1) according to claim 14, **characterized in** that the core wire (3) is made of a metal having a coating of aluminium, which is oxidized to Al_2O_3 .

17. The male connector (1) according to anyone of claims 1–11, **characterized in** that the core wire (3) is made of an insulating material.

5 18. The male connector (1) according to anyone of claims 1–17, **characterized in** that the conductors (5) are provided with a layer of insulating material (13).

19. The male connector (1) according to anyone of claims 1–18, **characterized in** that the core wire (3) in the male connector (1) is separate from the core wire in the guide wire (2).

20. The male connector (1) according to anyone of claims 1–18, **characterized in** that the core wire (3) in the male connector (1) is an extension of the core wire in the guide wire (2).

21. The male connector (1) according to anyone of claims 1–20, **characterized in** that at least two points on the mantle surface of the core wire (3) are in contact with the inner surface of the conductive members 4, said points having such positions that the core wire (3) is a radially self-positioning core wire (3).